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AUTHOR Theus, Kathryn T.
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ABSTRACT

To examine the way college and university officials monitor quality, researchers conducted an open-ended telephone survey of trios of presidents, CAOs, and trustee chairs in the spring of 1989. These people were asked to discuss how well they thought their institutions were doing and how they knew so. Their responses reflected the question of in whose interest the improvement has been identified. Results are discussed according to: greatest improvements in quality; competitive institutions viewing quality improvements; what leaders most want to know about quality; incentives academic leaders use for quality improvement; different incentives emphasized at competitive institutions; and attributes leaders associated with quality (quality students, faculty, teaching, research, boards, and presidents, and learning environment). It is concluded that particular governance roles do not significantly influence the judgments about quality improvements or incentives. More than 70% of the respondents indicated they relied on qualitative and intuitive evidence for making judgments about how well their institutions were doing, and 40% used no qualitative measures at all. Those at more competitive institutions gathered evidence in more systematic ways than others. The relative competitiveness of an institution, as a proxy for quality, may be related to perspectives on which leaders base strategies designed to increase and sustain quality. An appendix lists six analyses of variance factors. Tables are included. Contains 29 references. (SM)

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MONITORING INSTITUTIONAL QUALITY: WHO WANTS TO KNOW?

Kathryn T. Theus
National Center for Postsecondary Governance and Finance
University of Maryland
College Park, MD 20742

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ASHE ASSOCIATION FOR THE STUDY OF HIGHER EDUCATION

Texas A&M University
Department of Educational Administration
College Station, TX 77843
(409) 845-0393

This paper was presented at the annual meeting of the Association for the Study of Higher Education held at the Ritz-Carlton, Buckhead in Atlanta, Georgia, November 2-5, 1989. This paper was reviewed by ASHE and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC collection of ASHE conference papers.

PROPOSAL ABSTRACT

Monitoring Institutional Quality: Who Wants to Know?

"How well do you think your institution is doing and how do you know?" This was the theme of a Spring 1989 telephone survey of trios of presidents, chief academic officers and chairpersons of boards of trustees (n = 248) at 82 randomly selected higher education institutions representing four Carnegie categories. The governance team was asked to identify indicators of institutional quality used to justify claims of improvement, and to indicate what information each most wanted but could not get. Similarly, teams were asked to identify incentives for quality improvement that worked, and why they worked. An analysis of interviews showed differences in perspectives on improvements and incentives, e.g., improvements "in whose interest?" (or "who wants to know?"), varied by degree of competitiveness of the institution. (Competitiveness was used as a proxy for quality.)

Monitoring Institutional Quality: Who Wants To Know?

How do academic governance teams view institutional quality? Presidents, chief academic officers (CAOs) and trustee chairs were asked "How well is your institution doing and how do you know?" in a survey in the Spring of 1989. Their responses reflected a separate, yet crucial, context question, in whose interest has the improvement been identified, e.g., "Who wants to know?"

Taking a systems perspective, the state of wellness of an organization cannot be interpreted without a clear sense of a public or client base, e.g. the organizational environment. Without such a sense, answers to the question "Who wants to know?" will likely reflect individual or role defined responses alone. In a worst case sense, a president may respond as a shepherd but may not have a following, the chief academic officer may behave as an advocate for educational excellence but forget to ascertain what students are learning, and a trustee, functioning as steward or guide, may fail to recognize market pressures that contradict institutional directions.

Evidence used to justify claims of quality often lacks rigor, especially when the information sought is for personal insight alone. Anecdotal measures resulting from personal impressions (which may or may not be systematically obtained) may also have little obvious correlation with the effect being explained. However, recent literature suggests that involvement with constituencies which results in anecdotal or descriptive feedback that is offered to organizational units does contribute to greater effort and productivity of unit members, as well as to improvements in external perceptions of quality (Astin, 1980; Cross, 1989). With continued administrative involvement such "Hawthorne effects" might well become normative expectations of the organizational culture.

Quality generally has been approached in four or five ways: Astin (1980) in looking at an institution's educational mission identified five views: Nihilist (quality can't be measured); reputational (quality is determined by consensus); resources (quality comes from having bright students, trained faculty with a modicum of prestige, and institutional affluence); outcomes (quality resides in the proportion of graduates who win fellowships, earn doctorates, persist to graduation, net large lifetime earnings, are listed in Who's Who); and value-added (quality means the degree to which the institution is able to affect its students favorably) or some combination of these. In fact, reputation, resource and outcomes are generally highly correlated.

Astin, however, believes regularized mechanisms for gathering feedback on educational quality and disseminating the results to faculty, administrators and students to be most useful in monitoring quality. His means include studies of 1) classroom

instruction through student surveys 2) classroom instruction through faculty visits 3) advising through student surveys, 4) student services through surveys 5) and student time use through audits (making the assumption that greater involvement yields greater cognitive development). In the absence of such information, Astin argues administrators cannot hope to assess progress or to provide meaningful educational leadership.

Cross (1989) in looking at five types of feedback, found student appraisals of classroom teaching to be valid and unbiased, she also found faculty reviews of classes that focused on description (rather than remediation) to provide increased quantity and quality of interactions, cooperation and discourse about teaching.

These latter two investigative mechanisms would suggest that institutions that provide "knowledge of results" about "time on task" -- that gather and share feedback on student and faculty development, and address issues to enable growth under minimally threatening conditions -- become quality institutions (Bloom, 1974; Gagne, 1974; Kulhavy, 1977; Kulhavy and Yekovich, 1978).

Garvin (1987) found similar monitoring in industry tends to lower product defect rates. For example, frequency of product review (especially providing information on defects and field failures), customer satisfaction of product acceptability, up-to-date plants and processing procedures (including well-trained workers), consistently and carefully monitored quality control measures over incoming components, and long-term commitment to the fundamentals (working with vendors, training the workforce, developing a quality information system, setting targets for improvement, and demonstrating commitment from the highest levels) are all characteristic of organizations with low defect rates.

Similarly, Kanter and Summers (1987) stressed that monitoring quality is not a unidimensional activity. Because there are multiple constituencies both internally and externally, the only sensible course for organizations is to acknowledge these multiple realities and to develop explicit approaches to them.

Two concepts related to quality are "excellence" and "effectiveness." In fact, considerable overlap can be found among indicators of all three. Among the approaches to assessing excellence are these: political economy (how well colleges support and enhance the economic strength of the community, state or nation), productivity (how efficiently colleges convert inputs into outputs), value-added (how well schools enhance individual development), producer-consumer (determined by the quality of the producers or teachers and the consumers or students); the content approach (the quality and scope of the curriculum); and the

eclectic approach (multiple dimensions of efficiency, effectiveness and characteristics of participants) (Morgan and Newell, 1981; Goodlad, 1984; Sizer 1984; Boyer, 1983).

Effectiveness measures include goal attainment (Campbell, 1977; Goodman and Pennings, 1977; Hall, 1978; Weitzman, 1986); acquisition of resources, including skilled staff and volunteers (Georgopoulos and Tannenbaum, 1957; Bennis, 1966; Molnar and Rogers, 1976); cooperative linkages with the environment -- a political model that Weiss (1972) called constituency satisfaction (Bennis, 1966; Katz and Kahn, 1975); and smoothly linked and integrated internal processes including adaptability to change, extensive involvement with constituencies in the organization, shared commitment to goals, high productivity and quality of service, and strong morale and satisfaction among participants (Georgopoulos and Tannenbaum, 1957; Katz and Kahn, 1975; Anthony and Herzlinger, 1975; Pennings and Goodman, 1977; Holland, 1986).

Because monitoring organizational quality has been shown to require multi-dimensional approaches, indicators can be grouped and interpreted as dimensions of a cybernetic organizational model (Katz and Kahn, 1975). "Throughputs" or the important role of integrated internal production processes may be included among perspectives that focus on inputs and outputs. On the input side, popular indicators include the ability to acquire appropriate resources from the environment, such as money, high calibre students and an expert workforce. Process or throughput indicators include adaptability, involvement with constituencies, shared commitment to goals, and a high degree of effort and care in the refinement of services rendered.

Traditional output indicators include measures of success in goal attainment or product acceptance either through tracking the recognition of students after graduation and/or by tracking employee expertise during their service with the organization (e.g., fellowships or advanced degrees earned, lifetime earnings, special recognitions or grants obtained). Public perception measures provide an external validation of the organization's effort and effect. Attention to this feedback loop allows organizations to adapt to environmental contingencies and to change accordingly. This view also reflects a political perspective -- the perception of and consensus about how well constituencies are being served and the degree to which they hold the organization accountable for its service. Upon such factors, organizational reputation is built. Value-added measures, if they could be isolated, would be the quintessential estimators of output. Unfortunately, separating the effects of other social factors from the institution's ability to enhance individual development has been difficult for social science researchers.

Problems in defining measures of excellence, effectiveness

or quality are similar. Lindsay (1982) pointed out the difficulties of capturing in a set of measurements the intangibility of the multiple objectives and outputs in education and the different values placed on them by people with differing perspectives. It is equally difficult to get those who look at measures to recognize their limitations, especially in comparisons across institutions.

Yet much can be learned about the general character, health and sophistication of the organizational system by looking at the kinds of quality measures identified as important by its management team members, and especially by the degree to which each administrative leader takes into account perspectives of internal and external constituencies.

Methodology

To examine the way college and university officials monitor quality, researchers conducted an open-ended telephone survey of trios of presidents, CAOs and trustee chairs in the Spring of 1989. Some 72 percent of the randomly selected institutions responded for a total of 82 institutions and 248 respondents balanced among four Carnegie categories (research, comprehensive, liberal arts and community colleges). Conversations ranged in length from 15 to 30 minutes. Governance team members were asked to identify the indicators of institutional quality they used to justify claims of improvement, and to indicate what information each most wanted but could not get. Similarly, teams were asked to identify incentives for quality improvement that worked and why they worked, and to provide descriptors they associated with numerous facets of institutional quality.

Evidence was coded as it related to different facets of the cybernetic system, and transcripts of conversations were evaluated for clues to organizational process and context, including constituencies implied or explicitly considered when evidence was offered.[1] Finally, data were examined for differences in behavior by institutional type and administrative role, and were compared to derived ratings of competitiveness, difficulty or excellence (Barron 1988; Peterson 1989; Fiske 1988) as a proxy for quality. Analyses of Variance (ANOVA) and Crosstabulations generated through Statistical Package for the Social Sciences (1987) allowed rsearchers to examine relationships among key variables.

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[1] Calculation of intercoder reliability fell within an acceptable range at 83 percent. When variance in coding occurred, it could be accounted for by the contingent structure of the survey questions, whereby subsequent codes were occasionally dependent upon a previous classification.

Greatest Improvements in Quality.

When administrators and trustees grappled with questions of quality and incentives for improving quality, they claimed they could recognize quality when they saw it, even with apparent misgivings about data. And what they saw varied widely.

The chancellor of a California university called quality the "energy, enthusiasm, and talent of the faculty." The president of an Hawaiian university likened quality to creating "a culture and climate on campus that nurtures excellence." And a Mississippi president admonished: "Include everybody and attempt to do 1,000 small things well rather than one large thing extremely well."

As a group, presidents, chief academic officers (CAOs) and trustees noted improvements in academic program first when asked "What are the two or three greatest improvements in quality (however you may define the term) that you have observed during your tenure in office?" Better faculty, better students, better administration, improvements in physical plant, improved financial position, improved reputation and improved institutional pride followed (Table 1).

Table 1

ACADEMIC LEADERS CITE GREATEST IMPROVEMENTS IN QUALITY

Category	Percent
Academic Program	23.4
Faculty	21.2
Students	16.3
Administration	15.0
Physical Plant	10.5
Financial Position	9.1
Reputation	3.2
Institutional Pride	1.3
Total	100.0

The evidence they cited for these improvements included faculty research and demographics, student data, academic program, attributes of administrations, external linkages, financial position, and physical plant (Table 2).

Table 2

HOW LEADERS JUSTIFIED CLAIMS OF QUALITY IMPROVEMENTS

Evidence	Percent
Faculty Research and Demographics (publications, grant activity, qualifications of faculty, teaching performance)	22.9
Student Demographics (admission scores, enrollment figures, subjective faculty assessment)	19.9
Academic Program Characteristics (revised curriculum/program, stringent grading, teaching improvement centers, difficulty majors, graduate school matriculation, perceptions of graduates, assessment tests, student-faculty ratios, national recognitions by scholastic honor societies)	13.4
Attributes of Administration (leadership, personnel, meeting goals, clear mission efficiency, comparative institutional standing, evaluation techniques)	12.9
External Linkages (reputation, product acceptance, professional placement of graduates, recognition, media coverage, positive comments of business, alumni and community)	10.8
Financial Position (deficits reduced, state funding, endowment faculty salaries, endowed chairs, research and development funds)	10.3
Physical Plant (improved appearance, new buildings, money spent positive comments)	8.9
Other	.9
Total	100.0

Coders inferred from responses that evidence was gathered systematically, e.g according to a coordinated and organized method or process, about half the time (49.5%), was gathered unsystematically a quarter of the time (27.6%) and in combination (systematic and unsystematic) for the balance (17.2%), although a portion (5.7%) identified no process.

And what kind of data did they use to make their judgments? More than a third could be characterized as both intuitive and qualitative (35.1%) or as intuitive/qualitative and quantitative in combination (30.6%). Quantitative measures alone were relied on by only 29.7 percent of the respondents. About 4.6 percent relied on pure intuition to make their judgments.

The functions of the organizational system to which attention was given varied. Most institutions cited improvements related to production or cultural processes (throughputs -- 57.6%) while improvements in inputs were second (33.7%) and improvements in outputs, third (8.7%).

The interests taken into account by executives when citing improvements -- "improvements for whom?" -- were primarily institutional, e.g., academic administrators viewing and judging an institution's own record in comparison with its peers (55.6%). Student perspectives followed, including improvements in support of student learning, comfort, growth and goal attainment (35.3%). Perspectives on faculty welfare, such as increased involvement with governance and other reasons for being associated with the institution, were rarely mentioned (5.8%), and concerns for business and community interests, foundations, and alumni in repayment for their contributions to the institution, garnered a slim 3.2 percent of the responses.

Competitive Institutions View Quality Improvements

SPSSx Analyses of Variance (ANOVA) and Crosstabulations allowed researchers to determine whether differences in ratings of competitiveness among institutions varied systematically with the kinds of improvements or incentives noted, the evidence offered for the improvement, the process used for acquiring information, the attention to parts of the organizational system, or the public of concern to the organization. (Because the data were categorical, limitations constrained the degree of statistical modeling allowed in analyses).

ANOVAs designating Degree of Competitiveness as the dependent variable the factors above as independent variables, showed that the kind of improvement (although not the evidence for the improvement), the process engaged in for collecting information, the part of the organizational system considered and the perspective on constituents, all varied at statistically significant levels (Table 3). [2]

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[2] Because external ratings of competitiveness have been used to compare differences in organizational behaviors in this study, one naturally wonders where Carnegie institutions fall on the same dimensions of competitiveness. One-fifth of research universities and one-tenth of liberal arts colleges fell within the highest ranks of competitive institutions. The preponderance of community colleges fell in the least competitive ranks with majorities of the other three categories of institutions rating average ($p = <.0000$).

Table 3
SUMMARY TABLE OF ANOVAs (2x2):
Degree of Competitiveness with Factors

Source of Variation	Sum of Squares	d.f.	Mean Square	F	Significance of F
Improvement	4.3	2	.86	2.39	.04
Residual	81.36	226	.36		
Total	85.66	231	.37		
Process	2.55	2	1.27	3.45	.03
Residual	82.68	224	.37		
Total	85.23	226	.38		
System Focus	3.95	2	1.98	5.52	.005
Residual	84.74	236	.36		
Total	88.70	238	.37		
Perspective	6.24	4	1.56	4.43	.002
Residual	82.46	234	.35		
Total	88.70	238	.37		

248 cases

Examination of contingency tables representing the interactions among measures of competitiveness and key factors showed where differences occurred (See Appendix for tables). For example, highly competitive institutions tended to stress improvements in students, while moderately competitive institutions focused more on faculty improvements and least competitive organizations focused on administrative improvements ($p = <.04$).

Similarly, highly competitive organizations utilized systematic and unsystematic methods for obtaining information <u>in combination</u> to a greater extent than others, while least competitive organizations more often offered no process for obtaining their information ($p = <.03$).

A clear illustration of differences emerged on the phases of operation within the organizational system. Most competitive colleges and universities focused to a far greater extent on inputs, such as acquiring better students or expert faculty, ignoring outputs altogether. Less competitive organizations focused more on administrative processes (throughputs) and outputs, such as student achievements after graduation and public perceptions of the organization ($p = <.01$)

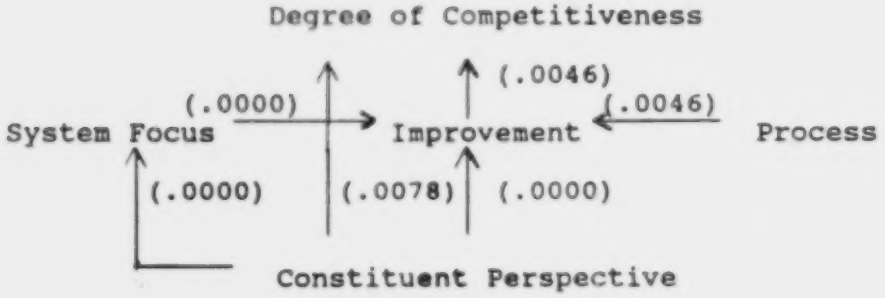
On the factor, perspective on improvements for whom, or "in whose interest," executives of highly competitive institutions

focused on institutional interests, e.g., the academy views its own excellence in comparison with its peers. Executives of less competitive institutions expressed decreasing emphasis on institutional perspectives and increasing interest in student and faculty perspectives ($p = <.00$). The differences in interests attended to served as an indicator of what executives deemed important to monitor. When executives of competitive colleges watched their comparative institutional standings with peers, they were seeking early warning signals on changes in inputs they considered critical for maintaining a competitive edge. When executives of less competitive colleges focused on student or faculty perspectives, they may have been less concerned with maintaining a market edge, but more concerned that the constituencies involved with the institution were satisfied with their relationships and with the institution's ability to meet individual career goals.

Hierarchical log linear tests of partial chi squares indicated the following statistically significant associations suggestive of an underlying operative model. The perspectives organizations take into consideration influence the kind of improvement likely to occur and the likelihood of its having an effect on competitiveness. Similarly, the organizational system focus and the process for selection of indicators influence the improvements organizations identify, the system focus having been determined by the underlying perspective taken (see Figure 1).

Figure 1

A MODEL OF FACTORS CONTRIBUTING TO COMPETITIVENESS *



* Numbers in parentheses indicate chi square significance levels

What Leaders Most Want To Know About Quality

Respondents were asked: "If you could generate any information at all about whether quality is improving at your institution, what would you most like to know?" and "What would you do with the data if you had it?" Presidents, CAOs and trustees responded in quite similar ways. There were no statistically significant differences by degree of competitiveness.

Almost two-thirds of CAOs and board chairs wanted more information about student learning, growth, success and satisfaction (63%); others mentioned quality of faculty teaching and research (19.3%) or the institution's comparative standing with its peers, including external support and recognition (15.3%). The data they would seek were generally concrete and observable, although about one-fifth wanted purely attitudinal data. Comments of respondents pointed out the apparent conflict in opinion on the suitability of assessment measures for capturing the ephemeral nature of quality.

A president at a major university said he would want more data on teaching and research. "I'd look more fully than we do at the success of our graduates (We look at medical entrance exams, and GREs, but not systematically and we do interview graduating seniors.) I would systematically poll the alumni to see how they're doing, particularly in the first five years after graduation. I'd also look at research -- grants and public awards. The number and quality of them is evidence of the school's reputation in the field. Evaluation of people external to campus, accrediting bodies, etc. provides objective means of determining the influence of the faculty."

A CAO disagreed: "It's all self-evident. I don't need any new tests. I specifically reject all systems of tests such as outcome assessment as devices for telling me anything about quality.

Presidents, CAOs and trustees said they would use such data to improve teaching and to revise curriculum (47.5%), to ensure faculty or staff accountability, to inform merit pay evaluations and to press for change (37.3%), or to improve the effectiveness of marketing and fundraising (8.6%).

Their comments on missing information appeared to center on two functions of the organizational system: Half (49.2%) showed concern for throughputs -- care in teaching and to a lesser degree research, productivity, adaptability, and concern with organizational mission; and somewhat less than half expressed concern with outputs -- assessing goal attainment, product acceptance, perception of organizational effort, and for a few, the "value added" to students (44.3%); Very few executives

expressed concern about inputs -- the ability to acquire financial, student and faculty resources and expertise, as well as the goodwill of communities (6.5%).

Perspectives taken by administrators in responding to the question "improvements for whom," overwhelmingly reflected concern for student learning, comfort and goal attainment (79.3%) as affected by organizational processes. A second concern reflected the academy's interest in judging its own excellence and ability to garner support in comparison with its peers (14.3%). Small concern was expressed for faculty interests (3.7%) or for responding to external constituencies (foundations, business, community and alumni -- 2.7%).

Incentives Academic Leaders Use for Quality Improvement

The question, "What is the single most effective incentive currently being used on your campus to improve quality?" generated three primary responses: social influences or pressure (which many would not regard as an incentive); monetary influences; and symbolic, non-financial recognition. Most incentives mentioned reflected concern with faculty performance at some level.

Presidents, CAOs and trustees (31.6%) depended on normative incentives, such as peer and student pressure, to improve the quality of their institution, although a few suggested influences such as involvement of faculty in governance and encouraging institutional pride. Another 30.3 percent relied on monetary incentives to improve faculty or staff performance, through merit pay, cash rewards, prizes, travel money, institutional research funding and grants. About a quarter (25.7%) used non-financial, symbolic awards and recognitions (luncheons, certificates, honorary titles, teaching load reductions, nice offices, better laboratories, additional secretaries) to reward quality. Almost no one mentioned group incentives for group performance. A small number (5.6%) provided incentives for improving student performance, such as awarding special scholarships and recognitions and setting high standards in the curriculum. Only 2.8% said they used tenure and promotion evaluations as incentives for improving the quality of faculty performance.

"We do so many little things -- prizes, salary increases, bonuses, celebrations, letters from the president or provost -- explicit and overt in a way that is more than proforma or routine," a president said.

"Money is our incentive. Is there any other that you know of?" a CAO remarked.

Reasons cited for why the incentive was so effective suggested three mechanisms: institutional pride, individual self-worth, and individual self-interest. Respondents said stressing institutional expectations makes standards explicit and encourages or instills pride in work and identification with the successes of the institution (44.9%). Similarly, validation of an individual's contribution through symbolic recognitions by superiors and peers validates one's self-worth (27.7%). A quarter also used validation of one's contribution through financial rewards provides material benefits to recipients (natural self-interest - 23.3%). However, a number of respondents were not certain that incentives were effective, no matter what they were.

Incentives reflected attention to the following functions of the organizational system: 63.5 percent showed interest in throughputs or processes supporting teaching, service, leadership, adaptability, shared commitment, high morale and satisfaction; 25.4 percent reflected interest in judging outputs or goal attainment, product acceptance, public perceptions of accountability and effort and "value added" to students. Only 11.1 percent reflected interest in supporting the acquisition of inputs -- money, students, faculty expertise, goodwill or political support.

Incentives "for whom" revealed that faculty were the primary targets of consideration among institutions responding. Some 73.8 percent provided incentives for greater faculty involvement, excellence of performance and other reasons for being associated with the institution. Only 16.5 percent mentioned incentives directed to support student learning, comfort, achievement or other student goals. And 9.7 percent focused on improving administrative and staff performance, leadership and support as compared to peer institutions.

Different Incentives Emphasized at Competitive Institutions

College and university presidents, CAOs and board chairs from more competitive institutions cited different incentives and focused on different parts of the organizational system, but they did not differ significantly on why they used incentives or "in whose interest" they were offered.

ANOVAs designating Degree of Competitiveness as the dependent variable and the two factors, Incentives and System Focus, as independents varied at statistically significant levels (Table 4).

Table 4
SUMMARY TABLE OF ANOVAs (2x2):
Degree of Competitiveness with Factors

Source of Variation	Sum of Squares	d.f.	Mean Square	F	Significance of F
Incentive	2.19	2	1.09	2.99	.05
Residual	81.17	222	.37		
Total	83.36	224	.37		
System Focus	2.64	2	1.32	3.65	.02
Residual	78.83	218	.36		
Total	81.47	220	.37		

248 cases

Contingency tables showed the interactions among measures of competitiveness, the incentives used and attention paid to the organizational system by college and university leaders (see appendix).

Although the chi square between measures of competitiveness and incentives was only significant at the $p = <.08$ level, the significant difference shown in ANOVAs between these two variables ($p = <.05$) suggests that the least competitive colleges and universities de-emphasized financial rewards, and the more competitive institutions placed greater emphasis on intrinsic rewards such as pride of work or institutional affiliation.

Similarly, highly competitive organizations provided incentives to ensure a steady flow of inputs or resources to a greater degree than average and non-competitive institutions. Those of average competitiveness placed greater emphasis on organizational outputs (tracking student earnings and honors after graduation, recognitions of employees, and public perception of the institution) and non-competitive colleges placed greater emphasis on organizational processes or throughputs (involvement, commitment to goals, productivity and care in exercising responsibilities) when they talked about their incentive structures ($p = <.02$).

Attributes Leaders Associated With Quality

Presidents, CAOs and trustees were asked to give a word or phrase they associated with the word, quality, when they used it in combination with concepts such as student, faculty member, learning environment, teaching, research, board and president. The purpose of the exercise was to examine how institutional

leaders responded spontaneously as the concept modified by "quality" changed. With only a few exceptions, leaders across institutions responded similarly.

Quality students. More than half described students by measurable abilities and more than 40 percent responded by naming student attitudes. A very few mentioned achievement subsequent to graduation. Sectarian schools were more likely to depend upon attitudinal descriptions of student quality ($p = <.04$).

Quality faculty. Faculty were almost universally known by their concerned attitudes (82%) while a small portion were characterized by extrinsic attributes (degrees earned, endowed chairs, publications, grants, national reputation).

Learning environment. Respondents were twice as apt to describe the learning environment as nurturing as they were to mention more concrete characteristics (facilities, libraries, etc.). CAOs and presidents were inclined toward values; whereas, trustees more often pointed to facilities ($p = <.01$).

Quality teaching. As in the case of faculty, 86 percent of the respondents described teaching as the strength of personal attributes of teachers or as enablement. About 10 percent spoke of external criteria, such as small classes or the value of the subject matter being taught.

Quality research. Research was described in terms that validated assertions of quality: More than half chose value of external recognition, while one-quarter mentioned value of use. Only one-quarter described research as linked to the researcher's attitudes of discovery, care, thoroughness, or scholarliness. The more competitive the ranking of the institution, the more likely research was described in ways that asserted validity ($p = .03$). CAOs tended to comment on the usefulness of research, especially as related to teaching, while presidents focused on the accuracy of research and the scholarly qualities of researchers; trustees spoke of research as discovery ($p = <.01$). Non-sectarian schools were most likely to speak of public recognition, significance and accuracy of research ($p = <.00$).

Quality boards. Respondents were three times as likely to describe boards by attitudinal or cognitive attributes as by actions. Public institutions tended to point to policy emphases and multiple perspectives of boards while independent schools spoke more of leadership and fundraising ($p = <.00$).

Quality presidents. Unlike faculty, twice as many respondents pointed to presidential actions as they did to process orientation. Leaders of independent institutions tended to speak of presidents as scholars, fundraisers, good managers and keen planners while public institution executives mentioned

open communicative and enabling styles of leadership ($p = <.03$). CAOs and presidents relied on attitudinal characteristics more frequently to support their assertions, while trustees spoke in more concrete terms ($p = <.00$).

Quality as a modifier of academic concepts generally defied quantification. The dependence on intrinsic measures of quality complicates their task of assessment and makes it more difficult. Only three terms partially lent themselves to quantifiable descriptions. Academic executives used such indicators for research 67 percent of the time, followed by students (52.3%) and learning environment (35.4%). For the balance of categories, less than 20 percent of their responses were quantitative.

Discussion

This study shows that particular governance roles, i.e., president, CAO, board chair, do not significantly influence the judgments about quality improvements or incentives. Regardless of role, institutional leaders in higher education judged improvements in quality and the effectiveness of incentives in supporting quality as inherently subjective enterprises. More than 70 percent of respondents at both elite and less selective colleges and universities nationwide indicated that they relied on qualitative and intuitive evidence, in substantial part, for making judgments about how well their institutions were doing. Forty percent used no quantitative measures at all. Clearly, higher education executives across the spectrum do not depend on mathematically derived procedures to evaluate quality.

However, distinctions could be made in approaches to assessment by the degree of competitiveness of the institution. And those differences reflected a sense of responsiveness to external judgments about organizational performance.

Those at more competitive institutions said they gathered evidence (qualitative as well as quantitative) in more systematic ways than others did. In other words, the process institutions use for gathering information may say something about how competitive they are.

The relative competitiveness of an institution, as a proxy for quality, may be related to perspectives on which leaders base strategies designed to increase and sustain quality. While we don't know much about how those rationales are determined, we can project how they are used to focus specific organizational activities that lead to improvements and incentives supporting quality.

The most highly competitive institutions take a proportionately greater institutional perspective as a basis for

identifying the kinds of improvements they claimed and the types of incentives that work. Leaders with an institutional perspective were interested in judging their college's or university's excellence in comparison with peers, and in planning based on those comparisons. Such assessments were only partly driven by quantitative data, but nevertheless were directed at achieving recognition in the eyes of a public or client base.

For both improvements noted and incentives used, the institutional perspective compelled competitive institutions to strategically focus on the input function of acquiring resources more than on other functions of the organizational system. This is more clearly recognized in the case of improvements noted, where acquiring expert faculty and outstanding students received proportionately greater attention than academic program improvements. The rationale appears to follow the logic that competitiveness likely hinges on the stature of an institution's faculty and students, rather than on the activities they engage in as a result of being enrolled or employed. Thus, the public's perception (which determines competitiveness) reflects an awareness of "quality in," not necessarily "quality out." Another likely explanation is that each institution monitors its perceived strengths in order to confirm or validate those known strengths.

In the case of incentives, competitive institutions focused in larger part on financial inputs as resources for the organization. This was reflected by the 3:1 reliance on monetary rather than non-financial/symbolic rewards for faculty in meeting their responsibilities for teaching and research. The difficulty in evaluating teaching, and in translating meritorious effort into data as a basis for monetary reward, may explain the additional strong emphasis on cultural expectations about quality at competitive institutions. Where allocation of material rewards posed problems, insistence on institutional pride and pride in personal performance was used to spur greater efforts at progress toward quality in teaching.

At less competitive institutions, where norms and traditions may not generate such allegiances and efforts, more attention was paid to attracting and keeping quality faculty by providing them with financial rewards. Faculty may be seen by executives as their institutions's best bet for becoming attractive to desirable students, e.g. the carrot on which recruitment of excellent students depends.

But what of non-competitive institutions? Perhaps because they are less able to communicate the achievements of faculty who are not primarily engaged in research, they focus more intensely on the process of meeting student goals and objectives. Chief executives do this by placing greater emphasis on teaching. They may be stressing to their client base, "See how much we do with

how little?" rather than, "Look at how much we have; can you imagine how much we do?"

The lack of systematic evaluation at less competitive institutions may reflect ambivalence because of the difficulty in deciding what to evaluate or the lack of resources to do evaluation, and while improvements at these institutions showed balance among areas cited -- administration, faculty and academic program -- relatively little attention was given to the achievements of students. One can only guess that in the case of students who may not go on to top graduate schools with high GREs and high salaries, their achievements may not be as easily measured or gauged. The focus on administrative processes or throughputs was similarly reflected in incentive structures for faculty. These depended on non-financial rewards and normative (occasionally directive or forceful) institutional expectations as modes of motivation. With fewer carrots available, other approaches will do.

As academic leaders grapple with assessment challenges presented by state, regional or internal groups, they should help such groups to recognize that much of what can be assessed about quality cannot be understood through quantitative measures. Nevertheless, institutions that look unflinchingly inward can systematically use a combination of measures to gauge their own successes, relative to peers. This orientation suggests that when the institution, itself, "wants to know," it directs monitoring efforts toward self-improvement. Competitive institutions do so by recruiting expert faculty and excellent students, and then garner financial and intrinsic resources to support their efforts. The study does not assert a causal relationship between self-monitoring, resource acquisition and the reaping of reputational rewards or quality --only a correspondance between these factors and externally derived measures of competitiveness.

REFERENCES

Anthony, R. & Herzlinger, R. Management Control in Nonprofit Organizations. Homewood, Il. Irwin, 1980.

Astin, A., "Traditional Conceptions of Quality in Higher Education: It's Time for a Change." Current Issues in Higher Education, 1980.

Barron's Profiles of American Colleges 1989. (ed. College Division of Barron's Educational Series). New York: Barron's Educational Series, 1988.

Bennis. W.G. Changing Organizations: Essays in the Development and Evaluation of Human Organizations. New York: McGraw-Hill, 1966.

Bloom, B. "Time and Learning." American Psychologist. 29 (1974): 682-688.

Boyer, E.L. High School: A Report on Secondary Education in America. The Carnegie Foundation for the Advancement of Teaching. New York: Harper and Row, 1983.

Campbell, J.P. "On the Nature of Organizational Effectiveness." in New Perspectives on Organizational Effectiveness (ed. P.S. Goodman and J.M. Pennings. San Francisco: Jossey-Bass, 1977.

Cross, K.P. "Feedback in the Classroom: Making Assessment Matter & A Brief Progress Report on the Classroom Research Project: Results of the First Ten Months." Distillations. Institute for Research on Higher Education. May, 1989.

Fiske, E.B., The Fiske Guide to Colleges 1989. New York, Time Books, 1988.

Gagne, R.M. The Conditions of Learning. New York: Holt, Rinehart, & Winston, 1977.

Garvin, D.A. Managing Quality. New York: Free Press, 1987.

Georgopoulos, B.S., & Tannenbaum, A.S. "A Study of Organizational Effectiveness." American Sociological Review. 22(1957): 534-540.

Goodlad, J.I. A Place Called School: Prospects for the Future. New York: McGraw Hill, 1984.

Goodman, P.S. and Pennings, J.M. New Perspectives on Organizational Effectiveness. San Francisco: Jossey-Bass, 1977.

Hall, R. "Conceptual, Methodological, and Moral Issues in the Study of Organizational Effectiveness." Working Paper, Dept. of Sociology, SUNY-Albany, 1978.

Holland, T. "The Effectiveness of Non-Profit Organizations." (Unpublished paper) University of Georgia, August 1986.

Kanter, R.M. and D.V. Summers. "Doing Well While Doing Good: Dilemmas of Performance Measurement in Nonprofit Organizations and the Need for a Multiple-Constituency Approach." in The Nonprofit Sector (W.Powell, ed.). New Haven: Yale University Press, 1987.

Katz, D. & Kahn, R.L. The Social Psychology of Organizations. New York: John Wiley & Sons, 1975.

Kulhavy, R.W. "Feedback in Written Instruction." Review of Educational Research. 47 (1977): 211-232.

Kulhavy, R.W. and Yekovich, F.R. "Feedback in Instruction." Encyclopedia of Instructional Development. San Diego: Naval Personnel Research and Development Center, 1978.

Lindsay, A.W. "Institutional Performance in Higher Education: The Efficiency Dimension. Review of Educational Research. 52(1982):175-199.

Lehman, A.E. and E.A. Suber (eds.) Peterson's Guide to Four Year Colleges 1989. Princeton, N.J.: Peterson's Guides, 1988.

Lehman, A.E. and E.A. (eds.) Peterson's Two-Year Colleges 1989. Princeton, N. J.: Peterson's Guides, 1988.

Molnar, J.J. & Rogers, D.L. "Organizational Effectiveness: An Empirical Comparison of the Goal and System Resource Approaches." The Sociological Quarterly. 17(1976):401-413.

Morgan, A.W. and Newell, L.J. "Strategic Planning at a Small College: To be Comprehensive or to ge Distinctive?" Planning for Higher Education. 9(1981):29-33.

Sizer, T.R. Horace's Compromise: The Dilemma of the American High School. Boston: Houghton Mifflin, 1984.

Statistical Package for the Social Sciences. Chicago: SPSS, Inc. 1987.

Weiss, C. Evaluation Research. Englewood Cliffs, NJ: Prentice-Hall, 1972.

Weitzman, J. "Program effectiveness and efficiency project." Philanthropy Monthly. January (1986):22-27.

APPENDIX

FOUR ANOVA FACTORS (Corresponding with Table 3)

1. CROSSTABULATION OF COMPETITIVENESS WITH IMPROVEMENT

Row PCT / Column PCT	Student	Faculty	Admin	Physical Plant	Acad Prog	Financial Position	Total
Most Competitive	27.85 14.7	33.3 7.7	11.1 5.1		22.2 8.0	5.6 5.9	7.8
Average	14.5 52.9	38.7 61.5	9.7 30.8	8.1 71.4	20.2 50.	8.9 64.7	53.4
Least Competitive	12.2 32.4	26.7 30.8	27.8 64.1	4.4 28.6	23.3 42.	5.6 29.4	38.8

Chi Square 18.69 d.f.= 10 p = <.04

2. CROSSTABULATION OF COMPETITIVENESS WITH PROCESS

Row PCT / Col PCT	No Process	Unsystematic	Systematic	Both	Total
Most Competitive	5.3 9.1	26.3 9.1	42.1 7.1	26.3 10.4	8.4
Average	.8 9.1	21.3 47.3	56.6 61.1	21.3 54.2	53.7
Least Competitive	10.5 81.8	27.9 43.6	41.9 31.9	19.8 35.4	37.9

Chi Square 13.39 d.f.= 6 p = <.037

3. CROSSTABULATION OF COMPETITIVENESS WITH SYSTEM FOCUS

Row PCT Col PCT	Input	Throughput	Output	Total
Most Competitive	63.2 13.6	36.8 5.1		7.9
Average	39.1 56.8	57.0 53.5	3.9 35.7	53.6
Least Competitive	28.3 29.5	62.0 41.6	9.8 64.3	38.5

Chi Square 11.69 d.f.= 4 p = <.019

4. COMPETITIVENESS BY CONSTITUENT PERSPECTIVE

Row PCT Col PCT	Student	Faculty	Institution	External	Total
Most Competitive	10.5 2.5		84.2 11.6	5.3 33.3	7.9
Average	31.3 50.	5.5 43.8	61.7 57.2	1.6 33.3	53.6
Least Competitive	41.3 47.5	9.8 56.3	46.7 31.2	2.2 33.3	38.5

Chi Square 24.36 d.f. = 8 p = <.002

TWO ANOVA FACTORS (corresponding with Table 4)

1. CROSSTABULATION OF COMPETITIVENESS WITH INCENTIVES

Row PCT / Col PCT	Financial	Non-financial	Intrinsic	Total
Most Competitive	36.8 / 9.1	10.5 / 3.6	52.6 / 10.9	8.4
Average	40.3 / 64.9	22.6 / 50.0	37.1 / 50.0	55.1
Least Competitive	24.4 / 26.0	31.7 / 46.4	43.9 / 39.1	36.4

Chi Square 8.33 d.f.= 4 p = <.080

2. CROSSTABULATION OF COMPETITIVENESS WITH SYSTEM FOCUS

Row PCT / Col PCT	Input	Throughput	Output	Total
Most Competitive	33.3 / 22.2	55.6 / 7.1	11.1 / 3.8	8.1
Average	12.4 / 55.6	60.3 / 51.8	27.3 / 62.3	54.8
Least Competitive	7.3 / 22.2	70.7 / 41.1	22.0 / 34.0	37.1

Chi Square 11.15 d.f.= 4 p = <.02